WE CLAIM:

1. An antenna radiator assembly comprising:

a circuit board formed from a plurality of dielectric layers dielectric layers with electrical conductors thereon, the electrical conductors including a feed point conductive trace and at least one conductive sheet comprising a ground plane;

at least one antenna radiator element spaced from said circuit board and when viewed in plan view there is an overlapping area where at least most of a surface area of the antenna radiator element overlaps a surface area of the circuit board thereby forming a sandwiched dielectric region therebetween;

a feed point connector coupling the antenna radiator element to the feed point conductive trace; and

a ground connector coupling the antenna radiator element to the ground plane,

wherein there is at least one of the circuit board dielectric layers in the sandwiched dielectric region disposed between the antenna radiator element and the ground plane.

2. An antenna radiator assembly as claimed in claim 1, wherein, there is at least one of the circuit board dielectric layers in the sandwiched dielectric region disposed between the antenna radiator element and the feed point conductive trace.

3. An antenna radiator assembly as claimed in claim 2, wherein the at least one of the circuit board dielectric layers in the

sandwiched dielectric region have an area extending across the complete overlapping area.

4. An antenna radiator assembly as claimed in claim 3, wherein the feed point conductive trace and the at least one conductive sheet are the only the electrical conductors supported by the circuit board and extending into the overlapping area.

5. An antenna radiator assembly as claimed in claim 1, wherein all of the dielectric layers forming the circuit board are disposed between the antenna radiator element and the ground plane.

6. An antenna radiator assembly as claimed in claim 1, wherein all of the dielectric layers forming the circuit board are disposed between the antenna radiator element and the feed point conductive trace.

7. An antenna radiator assembly as claimed in claim 1, wherein the feed point conductive trace is mounted on a first one of the dielectric layers when outside the overlapping area and when the feed point conductive trace is extending into the overlapping area it is mounted on a different one of the dielectric layers.

8. An antenna radiator assembly as claimed in claim 1, wherein 1 the conductive sheet and feed point conductive trace are on an outer dielectric layer surface of the circuit board that is facing away from the antenna radiator element.

9. An antenna radiator assembly as claimed in claim 1, wherein the at least one conductive sheet is a first conductive sheet coupled to another conductive sheet on a different dielectric layer.

10. An antenna radiator assembly as claimed in claim 9, wherein the first conductive sheet is coupled to the another conductive sheet by a plurality of vias.

11. An antenna radiator assembly as claimed in claim 10, wherein the vias are suitably spaced centre to centre by no more than $1/100^{th}$ of a wavelength when the element is resonating at a pre-defined operating frequency.

12. An antenna radiator assembly as claimed in claim 10, Preferably, the vias are spaced along an axis transverse to a longitudinal axis of the circuit board.

13. A radio communications assembly comprising:

a circuit board formed from a plurality of dielectric layers dielectric layers with electrical conductors thereon, the electrical conductors including a feed point conductive trace and at least one conductive sheet comprising a ground plane;

a transceiver coupled to at least one antenna radiator element via a radio frequency amplifier, the at least one antenna radiator element spaced from said circuit board and when viewed in plan view there is an overlapping area where at least most of a surface area of the antenna radiator element overlaps a surface area of the circuit board thereby forming a sandwiched dielectric region therebetween;

a feed point connector coupling the antenna radiator element to the feed point conductive trace; and

a ground connector coupling the antenna radiator element to the ground plane,

wherein there is at least one of the circuit board dielectric layers in the sandwiched dielectric region disposed between the antenna radiator element and the ground plane.

14. A radio communications assembly as claimed in claim 13, wherein there is at least one of the circuit board dielectric layers in the sandwiched dielectric region disposed between the antenna radiator element and the feed point conductive trace.

15. A radio communications assembly as claimed in claim 14, wherein at least one of the circuit board dielectric layers in the sandwiched dielectric region have an area extending across the complete overlapping area.

16. A radio communications assembly as claimed in claim 15, wherein the feed point conductive trace and the at least one conductive sheet are the only the electrical conductors supported by the circuit board and extending into the overlapping area.

17. A radio communications assembly as claimed in claim 10, wherein all of the dielectric layers forming the circuit board are disposed between the antenna radiator element and the ground plane.

18. A radio communications assembly as claimed in claim 13, wherein all of the dielectric layers forming the circuit board are

disposed between the antenna radiator element and the feed point conductive trace.

19. A radio communications assembly as claimed in claim 13, wherein the feed point conductive trace is mounted on a first one of the dielectric layers when outside the overlapping area and when the feed point conductive trace is extending into the overlapping area it is mounted on a different one of the dielectric layers.

20. A radio communications assembly as claimed in claim 13, wherein the conductive sheet and feed point conductive trace are on an outer dielectric layer surface of the circuit board that is facing away from the antenna radiator element.

21. A radio communications assembly as claimed in claim 13, wherein the at least one conductive sheet is a first conductive sheet coupled to another conductive sheet on a different dielectric layer.

22. A radio communications assembly as claimed in claim 21, wherein the first conductive sheet is coupled to the another conductive sheet by a plurality of vias.

23. An antenna radiator assembly as claimed in claim 22, wherein the vias are spaced centre to centre by no more than $1/100^{th}$ of a wavelength when the element is resonating at a pre-defined operating frequency.

24. An antenna radiator assembly as claimed in claim 22, wherein the vias are spaced along an axis transverse to a longitudinal axis of the circuit board.